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Testimony of Representative Jonathan Steinberg
Energy and Technology Committee
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HB 5846 AN ACT CONCERNING ENERGY GENERATION FROM ORGANIC REFUSE

Despite what one might surmise by standing near a herd of cows, methane is a clean and odorless gas that can be derived from organic material. Indeed, there are a number of processing facilities that already convert organic landfill material into methane, including processing facilities in Connecticut (e.g., Hartford, East Windsor, New Milford), which produce over 6 megawatts of electricity annually, classified as Class 1 renewable energy. Organic landfill is particularly good material for this process in that it has "aged" sufficiently to make extraction extremely efficient (i.e., the methane has already been created).

But now that many communities have joined the "single stream" movement whereby solid waste organics are separated at the processing plant, there will be a growing amount of available organic material, primarily discarded foodstuffs. Although this material is relatively "more fresh" (or less decomposed) than comparable landfill, there are now somewhat new technologies that "cook" the material to a temperature where methane is generated. These new units can be installed adjacent to existing methane extraction equipment using methane to produce the heat required (hence, a "co-generation" capability).

A processing plant in San Leandro, California uses the methane generated to power internal combustion reciprocating engines which produce electricity to power the plant, so it no longer needs to use utility electricity.

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One such process purports to generate not only methane but, as the virtually only other byproduct (other than an odiferous oxygen sulfide gas), certifiable organic fertilizer suitable for broad application. This describes a remarkable efficient conversion of organic material into useful products while using/reducing greenhouse gases.

In that this industry segment is in its relative infancy, this bill recommends incentives to establish a pilot program in Connecticut to prove out the technology and its benefits. Federal funding for these incentives is likely to be available. The single-stream processing center in the greater Hartford area, which draws refuse from a wide swath of central Connecticut, might be well-suited to such a program. Any such incentive program would be designed to expire after a short period after which it is assumed that the operator will see returns sufficient to justify such investment in the necessary technology and modifications to existing methane extraction equipment.

Connecticut is committed to the exploration of clean energy alternatives but has to address the high initial cost, per energy unit generated, as compared to fossil fuel alternatives. In the case of methane, Connecticut already has experience with efficient extraction from landfill. This program would significantly expand the potential methane supply while reducing organic material to be disposed of otherwise, including incineration or landfills. With expanded supply, we could begin to consider broadening the methane-using infrastructure so that more buildings and homes could take advantage of relatively cheap, easily-accessible clean fuel.